R E M A R K S

Claims 1, 2, 7, 11, 13 and 14 have been amended.

A Request for Continued Examination (RCE) Transmittal is being filed concurrently herewith.

The claims have been amended to add a characterization of the physical layer transport rate which is subject to variations as a function of time "due to actual conditions of the transmission link itself, temperature variations and/or electromagnetic interference."

The rejection of claims 1 and 7 under 35 U.S.C. §102(e) as being anticipated by Meurisse et al (US 5,959,973) is respectfully traversed. Meurisse et al does not disclose or suggest a "physical layer transport rate", "radio interference", weather, or interference of any kind, function of time or anything to do with physical layer transport problems.

As Meurisse et al's title, "Method to Control Data Flow Rate, Queuing Network Node and Packet Switching Network", suggests, and in their description of the Technical Field of the invention, namely:

> "...to control data flow rate of data transmitted over a connection set up between a source terminal and a destination terminal via a plurality of network links and network nodes at least one of which constitutes a queuing network node which is able to return data flow control packets to the source terminal, the data flow control packets containing information based on which the data flow rate is to be controlled in the source terminal, a queuing network node wherein the method is performed, and a packet switching network including such a queuing network node." (Column 1, lines 5-17, emphasis added.)

the reference deals with controlling data flow rate as a function of queuing at a network node.

As noted above, the reference fails to suggest a physical layer, radio interference, weather interference, or any such variations of the function of time. Thus, Meurisse et al is no anticipation of claims 1 and 7.

Claims 2 - 5, 8, 9, 11, 13 and 22 - 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Meurisse et al. As shown above, Meurisse et al does not suggest or intimate in any manner, fashion or form a physical layer transport rate that is subject to variations as the function of time due to conditions of transmission of the data link itself due to temperature variations and/or electromagnetic interference. The conditions referred to by Meurisse et al deals solely with queuing time, namely, Meurisse et al adjusts the packet rate as a result of the queuing point entering a different state of operation, called "the congested state." (See column 7, line 7.) Hence, there is no suggestion of the invention in this reference.

Claims 6, 10, 14 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Meurisse et al in view of Chang et al (1995 IEEE, pages 310-315), and this ground of rejection is respectfully traversed. Meurisse et al and Chang et al do not teach or suggest a system which relates to means to shape the data traffic to available bit rate (ABR) category of service having resource management cells periodically carrying out explicit rate

information in a feedback loop from an upstream source and including means to insert the rate information into the RM cells. As discussed above, Meurisse et al does not deal with or is not concerned with the same problem solved by applicants' invention, namely, the physical layer transport rate which is subject to variations as a function of time due to actual conditions of the transmission link itself, temperature variations and/or electromagnetic interference. There is no teaching or suggestion anywhere in Meurisse et al of dealing with the physical layer or radio interference or weather changes as a function of time.

Independent claim 14 is directed to a communication system in which a physical link layer transport rate varies as a function of time due to actual conditions of the transport link itself including temperature variations and/or electromagnetic interference. Again, Meurisse et al deals only with data flow rate in a queuing network and does not teach or suggest the conditions in applicants' invention.

Claims 15 - 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Meurisse et al and Chang et al, further in view of the Admitted Prior Art (APA).

Clearly, neither Meurisse et al nor Chang et al teach or suggest applicants' conditions of operations, namely, measuring of the variations and data rate due to changes in the physical layer due to actual conditions of the transmission link itself because of temperature variations and/or electromagnetic interference. Chang

et al has the same failing; and to engraft onto these the APA is hindsight reconstruction of the art using applicants' teaching.

The fundamental flaw in the Examiner's reasoning regarding Meurisse et al is that Meurisse et al measures the congestion at a queuing point and does not in any sense, manner, fashion or form suggest measurement of rate variations in the physical layer due to the physical link itself, temperature variations and/or electromagnetic interference.

In view of the above, further and favorable reconsideration is respectfully requested.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made
Request for Continued Examination (RCE) Transmittal

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In the event this paper is deemed not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 26-0090 along with any other additional fees which may be required with respect to this paper.

IN THE CLAIMS:

Claims 1, 2, 7, 11, 13 and 14 have been amended as follows:

1. (Amended) In a communications system for transporting data traffic downstream from an upstream source over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time due to actual conditions of the transmission link itself, temperature variations and/or electromagnetic interference, a method of managing transmission of the data traffic through the system, the method comprising: the steps of: monitoring the physical layer transport rate of said transmission link; sending to said upstream source a management message including rate information based on the monitored physical layer transport rate; and adjusting, by said upstream source, said transmission rate responsive to the rate information in said management message.

2. (Twice amended) A method as defined in claim 1 wherein said management message is generated in response to a monitored change in said physical layer transport rate.

7. (Amended) In a communication system for transporting data traffic downstream from an upstream source over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time due to actual conditions of the transmission link itself, temperature variations

and/or electromagnetic interference, a system for managing transmission of the data traffic through the system, the system comprising: monitoring means associated with the physical layer to monitor the transport rate of said transmission link; sending means to send to said upstream source a management message including rate information based on the monitored physical layer transport rate; and adjusting means, at said upstream source, to adjust said transmission rate responsive to the rate information in said management message.

11. (Twice amended) In a communications system for transporting data traffic downstream from an upstream source over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time due to actual conditions of the transmission link itself, temperature variations and/or electromagnetic interference, a method of managing transmission of the data traffic through the system, the method comprising: continually monitoring the physical layer transport rate of said transmission link; generating a management message in response to a change in said monitored physical layer transport rate which exceeds a threshold value, said management message including rate information based on said monitored transport rate; sending to said upstream source said management message; and adjusting said upstream source transmission rate in response to the rate information in the management message.

13. (Twice amended) In a communications system for transporting data traffic downstream from an upstream source over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time due to actual conditions of the transmission link itself, temperature variations and/or electromagnetic interference, a system for managing transmission of the data traffic through the system, the system comprising: monitoring means for monitoring the physical layer transport rate of said link; generating means to generate a management message in response to a change in said monitored physical layer transport rate which exceeds a threshold value, said management message including information based on said monitored transport rate; means to send said management message to said upstream source; and adjusting means at said upstream source to adjust said transmission rate in response to the rate information in the management message.

14. (Twice amended) In a communications system for transporting data traffic downstream from an upstream source over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time due to actual conditions of the transmission link itself, temperature variations and/or electromagnetic interference, a method of managing the transmission of data traffic through the system, the method comprising: shaping a data connection from the

source to the available bit rate (ABR) category of service, the ABR connection including integrated resource management (RM) cells for carrying congestion information back to said upstream source over a feedback path; monitoring the physical layer transport rate of said physical layer transmission link and recording a value derived from said monitored rate in said RM cell; returning said RM cell including the recorded value to said upstream; and adjusting by the upstream source the transmission rate in response to the recorded value in the RM cell.